Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A mass flow sensor, comprising:

a frame formed at least in part by silicon;

a membrane held by the frame;

a metal layer including a first structure and a second structure and being arranged above the frame;

a heating element formed by the first structure in the metal layer;

at least one temperature measurement element formed by the second structure in the metal layer; and

a moisture barrier arranged above the metal layer and formed at least in part by a nitride layer;

wherein the moisture barrier is formed at least in part by a top sandwich system including at least one first silicon oxide layer and at least one first silicon nitride layer.

2. (Canceled).

3. (Previously Presented) The mass flow sensor according to claim 1, wherein:

the nitride layer is a silicon nitride layer.

4. (Original) The mass flow sensor according to claim 1, wherein:

the moisture barrier forms a top layer of the mass flow sensor.

5. (Currently Amended) The mass flow sensor according to claim 4, wherein:

the moisture barrier is formed at least in part by ~~at least one of a top sandwich system and~~ a bottom sandwich system,

~~the top sandwich system includes at least one first silicon oxide layer and at least one first silicon nitride layer;~~ and

the bottom sandwich system is arranged beneath the metal layer and includes at least one second silicon oxide layer and at least one second silicon nitride layer.

6. (Original) The mass flow sensor according to claim 5, wherein:

at least one of the top sandwich system and the bottom sandwich system includes at least one silicon carbide layer.

7. (Original) The mass flow sensor according to claim 1, further comprising:

a silicon oxide layer arranged directly beneath the metal layer.

8. (Previously Presented) The mass flow sensor according to claim 1, further comprising:

a further nitride layer arranged between the frame and the metal layer.

9. (Previously Presented) The mass flow sensor according to claim 8, further comprising:

a silicon oxide layer formed by a thermal oxidation and arranged between the further nitride layer.

10. (Previously Presented) The mass flow sensor according to claim 9, wherein:

the further nitride layer includes a silicon nitride layer.

11. (Previously Presented) The mass flow sensor according to claim 9, further comprising:

an oxide layer arranged in a recess area beneath the further nitride layer.

12. (Previously Presented) The mass flow sensor according to claim 9, further comprising:

an oxide layer arranged in the membrane and below the metal layer; and

a recess arranged beneath the further nitride layer;

wherein the recess does not contain the oxide layer.

13. (Previously Presented) The mass flow sensor according to claim 3, wherein:

the nitride layer is formed by an operation selected from the group consisting of a PECVD operation, a LPCVD operation, and a CVD operation.

14. (Withdrawn) A method for producing a mass flow sensor, the method comprising:

forming a frame made at least in part by silicon;

forming a membrane held by the frame;

forming a metal layer above the frame, the metal layer including a first structure and a second structure;

forming a heating element by the first structure in the metal layer;

forming at least one temperature measurement element by the second structure in the metal layer; and

forming a moisture barrier arranged above the metal layer.

15. (Withdrawn) The method according to claim 14, wherein the moisture barrier is formed at least in part by a nitride layer.

16. (Withdrawn) The method according to claim 15, wherein the nitride layer includes a silicon nitride layer.

17. (Withdrawn) The method according to claim 16, wherein the nitride layer is formed by an operation selected from the group consisting of a PECVD operation, a LPCVD operation, and a CVD operation.

18. (Withdrawn) The method according to claim 14, further comprising:

forming a CVD oxide layer directly below the metal layer.

19. (Previously Presented) A mass flow sensor, comprising:

a frame formed at least in part by silicon;

a membrane held by the frame;

a metal layer arranged above the frame;

a heating element formed by a first structure in the metal layer; and

at least one temperature measurement element formed by a second structure in the metal layer, wherein at least one of:

a top sandwich system including at least one first silicon oxide layer between at least two first silicon nitride layers is formed above the metal layer; and

a bottom sandwich system including at least one second silicon oxide layer between at least two second silicon nitride layers is provided below the metal layer.

20. (Previously Presented) The mass flow sensor as recited in claim 19, wherein at least one of the top and bottom sandwich system includes:

a silicon oxide layer;

a silicon nitride layer on top of the silicon oxide layer;

another silicon oxide layer on top of the silicon nitride layer;

another silicon nitride layer on top of the other silicon oxide layer; and

a further silicon oxide layer on top of the other silicon nitride layer.

21. (Previously Presented) The mass flow sensor as recited in claim 19, wherein:

the bottom sandwich system in an area of the frame includes a silicon oxide layer as the bottom layer; and

the silicon oxide layer is removed in a recess area.

22. (Previously Presented) The mass flow sensor as recited in claim 19, wherein at least one layer is formed by one of a PECVD operation, an LPCVD operation, and another CVD operation.

23. (Previously Presented) The mass flow sensor as recited in claim 19, wherein at least one of the top and bottom sandwich systems includes a silicon carbide layer.